



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/578,394

05/05/2006

Koichiro Yamaguchi

504781400

7031

52044

7590

11/07/2008

SNELL & WILMER L.L.P. (Panasonic)

600 ANTON BOULEVARD

SUITE 1400

COSTA MESA, CA 92626

EXAMINER

CLIFTON, JESSICA L

ART UNIT

PAPER NUMBER

4144

MAIL DATE

DELIVERY MODE

11/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,394	Applicant(s) YAMAGUCHI ET AL.	
	Examiner JESSICA CLIFTON	Art Unit 4144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/05/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-19 have been examined and are pending.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because the abstract contains 161 words which exceed the 150 word limit. Correction is required. See MPEP § 608.01(b).
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is

Art Unit: 4144

suggested: Broadcast Transmission Device and Method for Transmission Stream

Content Conversion.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 18 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. As per claim 18, “**a content conversion program...**”, a program which is not tangibly embodied in a computer readable storage medium is considered non-statutory subject matter. As per the specification, paragraph [0167], “**code transmitted across telecommunications networks, wired or wireless...**”, a signal which carries code is considered non-statutory subject matter.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 4144

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3, 5-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al. (U.S. Publication No. 2004/0125761) and further in view of Keck et al. (U.S. Pub. No. 2004/0228414).

As per claim 1, 17, 18, and 19, Yamaguchi discloses a content transmission device, conversion method, and program **that receives and converts** (i.e. changes) **digital broadcast data containing a multiplexed plurality of contents, and transmits the converted** (i.e. changed) **data** (Paragraph [0006], discloses a transmission device that receives data that contain multiplexed content, changes the

Art Unit: 4144

content of the original transmission and transmits the newly formed data), **the content transmission device comprising:**

a storing unit operable to store a plurality of processing models in correspondence with pieces of identity information, each processing model including composition information indicating a composition of the contents (Paragraph [0006], discloses a judgment list storage unit that stores a judgment list containing source element information. Paragraph [0092-93], discloses that the judgment list storage unit contains the selection list. The selection list includes the data broadcast name, PID, broadcast period, and selection flag), **normal-case conversion processing information for when the received broadcast data is normal** (The conversion processing information is the information used to determine which elements will form the new data stream. Paragraph [0094], discloses that the selection flag shows whether or not an element is to be included in the data broadcast),

an acquisition unit operable to acquire (i.e. separate) one piece of identity information (i.e. source data) from an external device (i.e. judgment list storage unit) that manages a transmission schedule (i.e. broadcast period) for the broadcast data (Paragraph [0006], discloses a separation judgment unit which separates one piece of source data from the first transmission stream (TS) and judges the data according to the judgment list. Paragraph [0016], discloses that source elements may include event messages that control timing of the commercial message processing);

a reception unit operable to receive the broadcast data(Paragraph [0078], discloses a receiving device which receives broadcast data);

a selection unit operable to select the processing model corresponding to the acquired piece of identity information (Paragraph [0008], discloses a selection list storage subunit which stores a selection list. The list pairs identity information with the determination of whether a module is for inclusion);

a detection unit (i.e. separation judgment unit) **operable to detect a received broadcast data portion whose composition differs from the composition information in the selected processing model** (Paragraph [0008], disclose that a judgment subunit which judges whether an identifier of a source element matches that of the selection list. Paragraph [0124], discloses a separation judgment unit that compares if the source elements of the broadcast TS with that of the selection list and makes a determination);

a conversion unit (i.e. replacement execution unit) **operable to carry out, based on a detection result and the selected processing model, normal-case conversion processing on a portion of the received broadcast data whose composition matches the composition information** (Paragraph [0124], discloses that if the separation judgment unit confirms a match, then it sends replacement instructions to the replacement execution unit), **and**

a transmission unit operable to transmit the converted data (Paragraph [0136], discloses that the replacement execution unit outputs the generated packets to the multiplexing device).

Yamaguchi does not disclose irregular-case processing.

However, Keck, in an analogous art, discloses **irregular-case processing** (i.e. invalidation processing) **on the portion of the received data whose composition differs from the composition information** (CRC determines if a packet was received with any error which includes data composition. Paragraph [0073], discloses a global fail flag which is set when an error is detected by checking the CRC. Once an error is detected, the invalidation process begins); **and**

irregular-case conversion processing (i.e. invalidation processing) **information for when irregularity has been detected in the received broadcast data** (Paragraph [0073], discloses a global fail flag which is set when an error is detected by checking the CRC. Once an error is detected, the invalidation process begins);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Yamaguchi to include irregular-case conversion processing, as taught in Keck for the purpose of efficiently receiving broadcast data.

As per claim 2, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 1**. Yamaguchi further discloses **wherein the normal-case conversion processing is processing for replacing, with a different content, at least one of the plurality of contents indicated in the composition information** (Paragraph [0131-3], discloses that if the separation judgment unit confirms a match, then it sends replacement instructions according to the replacement list to the replacement execution unit. Paragraph [0132], discloses that the replacement execution unit replaces content).

Yamaguchi does not disclose irregular-case conversion processing.

However, Keck discloses **the irregular-case conversion processing** (i.e. Invalidation processing) **is processing for replacing, with another content, a content in which irregularity has been detected based on the composition information** (Paragraph [0073], discloses that an error is detected by checking the CRC. Once an error is detected, the invalidation process begins which allows for new data to overwrite the invalid data).

As per claim 3, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 1**. Yamaguchi further discloses that **the detection unit** (i.e. separation judgment unit) **further judges whether or not the proportion of contents** (i.e. broadcast time period) **different from the composition information is greater than a reference level** (i.e. broadcast period)(Paragraph [0094], discloses that

Art Unit: 4144

the broadcast period column displays the time period in which the broadcast elements can be transmitted. Paragraph [0105], discloses that the separation judgment unit determines if the present time is within the broadcast period of the selection),

the conversion unit replaces, when the reference level (i.e. broadcast period) is judged to have been exceeded, the received broadcast data with replacement broadcast data indicated by the irregular-case processing model (Paragraph [0105], discloses that if the present time is not within a broadcast period, the process returns to the check the time period. Figure 6, illustrates this process. Paragraph [0153], discloses that the separation judgment unit waits for the present time to be within the broadcast period. The unit will then judge whether a broadcast element will be included), **and**

the transmission unit transmits the replacement broadcast data (Paragraph [0136], discloses that the replacement execution unit outputs the generated packets to the multiplexing device).

Yamaguchi fails to teach irregular-case processing.

However, Keck further discloses **wherein the storing unit further stores an irregular-case processing model that is not in correspondence with a piece of identity information, the irregular-case processing model indicates a composition of the contents that are included in data to be transmitted** (Paragraph [0046],

Art Unit: 4144

discloses that status items are stored in memory buffers. Paragraph [0054] discloses that the PID pass/fail is a status item that is included in further transmission. Paragraph [0051], discloses if PID filtering fails to determine that the PID value of the transport stream matches the reference PID value then it is a failed packet).

As per claim 5, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 1**. Keck further discloses **wherein the detection unit detects irregularity if (i) a content differing from the contents indicated in the composition information is received, or (ii) a portion of contents included in the contents indicated by the composition information is not received** (i.e. incomplete) (CRC determines if a packet was received with any error which includes data composition. Paragraph [0073], discloses a global fail flag which is set when an error is detected by verifying the CRC to be wrong or incomplete. Once an error is detected, the invalidation process begins)

As per claim 6, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 1**. Yamaguchi further discloses **wherein the pieces of identity information are triggers generated** (i.e. produced) **by an APS (Automatic Programming System)**. (Examiner understands an APS device is a device capable of generating data to enable timing control which includes a broadcast station. Paragraph [0011], discloses that local elements are produced by the broadcast station. Paragraph [0014], discloses that local elements may be event messages which are stored with

Art Unit: 4144

corresponding identifiers which may be included in the replacement list. Paragraph [0168], discloses that event messages (EMs) are timing triggers).

As per claim 7, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 1**. Yamaguchi additionally discloses a content transmission device, **further comprising:**
an output unit operable to notify an operator of the content transmission device (i.e. display) **of the detection result** (i.e. selection) **from the detection unit** (i.e. separation judgment unit). (Paragraph [0112], discloses screens in a receiving device for viewing only selected broadcast programs. Paragraph [0147], discloses that separation judgment unit selects a data broadcast program for distribution).

As per claim 8, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 1**. Yamaguchi further discloses **wherein the broadcast data is received in packet form, a packet ID** (i.e. PID) **is attached to each packet** (Paragraph [0083], discloses that broadcast data is transported in packet form and each packet has a PID), **the composition information contains the packet IDs scheduled for reception** (Paragraph [0111], discloses a outputting a packet with PID to the multiplexing device. Paragraph [0101], discloses that the multiplexing device sends the data to the receiving device), **and the detection unit detects when the packet ID of any received packet differs from the packet IDs in the composition information**

Art Unit: 4144

(Paragraph [0124], discloses that the separation judgment unit compares the PID to the PID of the selection).

As per claim 9, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 8**. Keck further discloses **the conversion unit carries out irregular conversion processing on the one or more packets that are irregular** (Paragraph [0073], discloses that an error is detected by checking the CRC. Once an error is detected, the invalidation process begins which allows for new data to overwrite the invalid data).

Yamaguchi does not disclose a CRC value.

However, Keck, discloses **wherein each packet includes a CRC value, the detection unit further judges whether or not the CRC value of each packet is correct, and judges a packet to be irregular when the CRC value is judged to be incorrect, and the conversion unit carries out irregular conversion processing on the one or more packets that are irregular** (Paragraph [0073], discloses that an error is detected by determining that the CRC is incorrect or incomplete for each packet. Once an error is detected, the invalidation process begins which allows for new data to overwrite the invalid data).

As per claim 10, the combination Yamaguchi-Keck disclose **the content transmission device of Claim 9**. Yamaguchi further discloses **wherein each packet has a respective packet ID attached** (Paragraph [0083], discloses that broadcast data

Art Unit: 4144

is transported in packet form and each packet has a PID), **the composition information contains the packet IDs that are attached to packets scheduled to be received** (Paragraph [0111], discloses a outputting a packet with PID to the multiplexing device. Paragraph [0101], discloses that the multiplexing device sends the data to the receiving device), **and the detection unit detects, among the packet IDs of the received packets, any packet IDs that differ from the packet IDs in the composition information** (Paragraph [0124], discloses that the separation judgment unit compares the PID to the PID of the selection), **and judges any packets having the differing packet IDs to be irregular** (Paragraph [0124], discloses that if the PID's are not the same, the replacement unit is notified of the separated TS packet).

As per claim 12, combination Yamaguchi-Keck discloses **the content transmission device of Claim 11**. Yamaguchi further discloses **wherein the modules are received in packet form** (Paragraph [0083], discloses that broadcast data is transported in packet form and each packet has a PID).

Yamaguchi does not disclose determining whether packets are complete or incomplete.

However, Keck in an analogous art, discloses **with the judgment requirement being that the packets of the module are complete, the detection unit detects a module to be irregular when the packets are incomplete** (Paragraph [0073], discloses that an error is detected by determining that the CRC is incorrect or

Art Unit: 4144

incomplete for each packet. Once an error is detected, the invalidation process begins which allows for new data to overwrite the invalid data).

As per claim 11, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 1**. Yamaguchi further discloses **wherein the contents are made up of a plurality of modules** (Paragraph [0083], discloses that content is structured from modules)

Yamaguchi does not disclose irregular-case conversion processing.

However, Keck discloses **the irregular-case conversion processing is replacement, with another module of a module in which irregularity has been detected, and the detection unit judges whether or not any portion of the received modules fails to meet a judgment requirement indicating a normal module, and when an irregular portion is present in a module, judges the module to be irregular** (Paragraph [0073], discloses that an error is detected by checking the CRC. Once an error is detected, the invalidation process begins which allows for new data to overwrite the invalid data).

As per claim 13, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 11**. Yamaguchi further discloses **wherein each module includes a module length expressing a data length of the module** (Paragraph [0083], disclose packets having a fixed data length and that modules are contained within these packets),

the judgment requirement is that the module length matches the actual data length of the received module (Paragraph [0198], discloses that the replacement execution unit is set to maintain bandwidth or the number of transmissions per carousel cycle. Paragraph [0212], disclose that maintaining bandwidth or maintaining the number of transmissions per cycle is achieved when the module sizes and the resource size are the same), **and**

the detection unit, when the data length of the received module fails to match the module length, judges the module to be irregular (Module length can be represented by the broadcast period. Paragraph [0124], discloses judging whether the present time is within the broadcast period. If not, it notifies the replacement unit of the separated packet).

As per claim 14, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 1**. Yamaguchi further discloses **wherein the broadcast data is in an IP (internet protocol) transport stream format** (Paragraph [0235], discloses receiving a data stream formed from IP packets).

As per claim 15, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 1**. Yamaguchi further discloses **wherein the broadcast data is transmitted in file format (i.e. text/binary format) from another device** (Paragraph [0232], discloses structuring tables in a text/binary format to be broadcast

Art Unit: 4144

as modules).

As per claim 16, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 1**. Yamaguchi further discloses **wherein the broadcast data is in MPEG-2 transport stream format** (Paragraph [0235], discloses receiving a MPEG-2 format data broadcast).

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al. (U.S. Publication No. 2004/0125761) and further in view of Keck et al. (U.S. Pub. No. 2004/0228414) as applied to claim 3 above, and further in view of Hanson (U.S. Pub. No. 2004/0123332).

As per claim 4, the combination of Yamaguchi-Keck discloses **the content transmission device of Claim 3**. Yamaguchi further discloses **when the detection unit detects that the proportion of the contents different from the composition information is less than the reference level, the conversion unit suppresses the conversion of broadcast data indicated by the irregular-case processing model, and converts the broadcast data based on the selected processing model** (Suppressing irregular-case processing allows only for normal-case conversion processing. Paragraph [0124], discloses judging whether the present time is within the broadcast period. If so, it compares information to the selected data and notifies the replacement unit).

Yamaguchi does not teach **wherein the reception unit receives broadcast data continuously**.

However, Hanson, in an analogous art, teaches **wherein the reception unit receives broadcast data continuously** (Paragraph [0006], discloses a television system where information is continuously broadcast to a receiver).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Yamaguchi to include **wherein the reception unit receives broadcast data continuously**, as taught in Hanson for the purpose of efficiently receiving broadcast data.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US Patent 5,847,751, Safadi discloses a CATV communication system for distributing broadcast and interactive communications. US Patent Publication 2005/0015797, Noblecourt et al. disclose a data referencing system. US Patent Publication 2003/0147391, Fujita et al. disclose a broadcast transmission apparatus. US Patent Publication 2003/0003861, Kagemoto et al. disclose a broadcast-program system, method, and program. US Patent 5,682,195, Hendricks et al. discloses a digital cable headend for cable television delivery system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA CLIFTON whose telephone number is

Art Unit: 4144

(571)270-7156. The examiner can normally be reached on Monday-Thursday, 8:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi Arani can be reached on (571) 272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. C./

Examiner, Art Unit 4144

/Taghi T. Arani/
Supervisory Patent Examiner, Art Unit 4144